REMARKS / ARGUMENTS

This reply is responsive to an Office Action dated July 20, 2004.

Claims 1 – 17 remain in the application. Claims 1, 2, 10, and 14 have been amended. Claims 4, 5, 7-9, 11, 13 and 15-17 were previously presented. Claims 3, 6, and 12 are original.

The amendments to the claims were made to render them more clear and definite and to emphasize the patentable novelty thereof, as well as to correct minor typographical errors. There is no intent to surrender equivalence. The amendments do not raise new issues, and do not require a new search. Thus, the amendments comply with 37 CFR § 1.116(b).

Claim Objections

Claim 1 was objected to due to the term "N" was allegedly lacking an antecedent basis. As amended, claim 1 now depends from claim 2, proper antecedent basis for "N" clearly exists and this objection should now be withdrawn.

Claim 14 was objected to due to a minor typographical error, which has now been corrected by amending claim 14. This objection should now be withdrawn.

Claim Rejections – 35 USC § 102(b)

Claim 2 has been rejected under 35 USC § 102(b) as being unpatentable over Casanova et al. (U.S. 5,031,075).

Casanova discloses a double-sided central electronics complex ("CEC") for increasing logic card density in a logic cage arrangement. Two logic cages

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are integrated, sharing a five component backplane assembly so that the cages and their logic elements 42 can be plugged into opposite sides of the backplane assembly.

Casanova does not teach, nor suggest, forming a rack assembly "wherein the depth of the rack housing is . . . equal to approximately 2Db." In fact, Casanova teaches away from this concept by disclosing that the logic elements 42 are plugged into a double-sided backplane assembly 38 shown in FIG. 3 of the Casanova disclosure. FIG. 3 of Casanova shows a backplane assembly that appears to include at least five layers of circuit boards and connectors. The Casanova's technique is incapable of ever achieving a rack depth "equal to approximately 2Db" as claimed by the Applicant.

Evidence that the Casanova technique is incapable of ever achieving a rack depth "equal to approximately 2Db" may be found by reference to FIG. 3 of the Casanova disclosure. FIG. 3 of the Casanova disclosure depicts an isometric assembly drawing of the Casanova rack assembly. An annotated copy of FIG. 3 of the Casanova patent accompanies this response for convenience as Exhibit A.

The depth of the Casanova logic elements 42 on the attached assembly drawing is measured to be approximately 15.5mm. The side plate 44 which extends the entire depth of the Casanova CEC and thus the rack assembly, is measured to be 40.0mm in depth.

Two times the depth of the Casanova elements 42 is equal to 2x(15.5mm), or 31mm. However, the depth of the Casanova rack assembly is measured to be 40.0mm, as shown by the depth of the side panel 44 in FIG. 3. Therefore, Casanova's approach yield's approximately 9.0mm extra or wasted space in the rack.

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This wasted space in Casanova's disclosed device is approximately 22.5%. This is calculated by dividing the 9mm of wasted space in Casanova's approach by 40mm which represents the depth of the Casanova rack.

It should be noted that a 22.5% amount of wasted space is extremely significant in the modern rack mounted computers. This differential in density would allow the Applicant's claimed approach to provide almost one-fourth more computing power to be disposed within the same floor space as compared to the Casanova disclosed device. The economic advantages of such an approach are significant.

The Office Action suggests in paragraph 3 that Dr being equal to approximately 2Db is an "inherent" relationship in the Casanova device. However, as mentioned previously, two times the depth of the logic element 42 is nowhere near equal to the depth of the rack. In fact, it is off by a factor of 22.5%. In other words, this alleged inherent relationship does not exist. Since the Casanova device does not, in fact, exhibit this inherent relationship, "where Dr is equal to approximately 2Db," this relationship therefore is not inherent, since it is not the same as claimed.

Even if this alleged "inherent" relationship did exist, a rejection under 35 USC 102(b) would still not be proper. In the case of *In re Spormann*, 363 F.2d 444 (C.C.P.A. 1966), the court stated "[t]hat which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown." It would logically follow that if obviousness cannot be predicated on what is unknown, then it would certainly follow that a claimed subject matter is not anticipated under 35 USC 102(b) on what is unknown, either.

In the instant situation, there is no evidence that Casanova discovered the relationship of "where Dr is equal to approximately 2Db" since he never taught,

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nor suggested it, as previously discussed. This becomes clear when analyzing the assembly drawing in FIG. 3 which depicts the depth of an assembly rack that is approximately 22.5% larger than two times the depth of the logic elements 42, and thus not "where Dr is equal to approximately 2Db".

Thus, even if it is alleged that an inherent relationship exists, what may be inherent is not necessarily known. A rejection under 35 USC 102(b) would not be proper since the relationship "where Dr is equal to approximately 2Db" was not known because it was not taught, nor suggested, by Casanova and, thus, cannot anticipate. The Casanova rack depth is about 22.5% greater than two times the depth of the Casanova logic elements 42, and thus they are clearly not approximately equal, as claimed by Applicants. Hence, the claimed subject matter certainly cannot be anticipated by Casanova.

The Applicant refers the Examiner to FIG. 4 of the Casanova patent. An annotated version of FIG. 4 accompanies as Exhibit B to this response, and includes three dimensions A, B, and C. Dimension C is the measured width of one of Casanova's logic elements, and is measured to be about 6mm in width. Dimensions A and B indicate offset distances between the two back-to-back rows of logic elements. Distance A is 1mm and is the amount of offset of the right hand end element 42 of the back cage, relative to the right hand end element 42 of the front cage. The rear left hand end element 42 is offset by a distance B equal to about 5mm, relative to the corresponding front left hand end element. Therefore, it is apparent from FIG. 4 that, as viewed right to left, the Casanova arrangement has an ever increasing amount of offset of corresponding front and rear elements. The staggered sets of logic elements 42 are not mounted "in a back-to-back registration without being offset." Specifically, the logic elements are mounted staggered significantly on the left

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hand end logic elements, and various other offset amounts for the other elements.

Moreover, because a 5mm gap is formed on the rear set of elements 42 relative to the front set of elements on the left side, and a 1mm gap is formed on the rear set of elements relative to the front elements on the right side, a total of 6mm, or the width of one Casanova logic element is wasted space. This has the effect of substantially lowering computing density. Therefore, Casanova does not disclose, nor suggest, the Applicant's claimed approach where the components are mounted "in a back-to-back registration without being offset" (emphasis added).

Thus, there is no teaching, nor suggestion, to use Casanova's technique to achieve the high computing density "rack assembly" as claimed by the Applicants where the depth of the rack assembly is "equal to approximately 2Db," and "wherein each one of the first-mentioned and said second electronic components has a depth Db," and are mounted "in a back-to-back registration without being offset."

Additionally, there is no disclosure, nor suggestion, of mounting "substantially contiguously in a back-to-back configuration" (emphasis added). Casanova, on the other hand, clearly mounts his cages and logic elements 42 back-to-back, but separated by a 5 element backplane assembly. Once again, there is wasted valuable space, as compared to Applicants' claimed arrangement.

For all of the above reasons, claim 2 patentably distinguishes over Casanova.

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Claim Rejections – 35 USC § 103

Claims 1 and 3-17 have been rejected under 35 USC § 103(a) as being unpatentable over Casanova et al.

Claim 1 has been amended to depend from claim 2. The remaining claims 3-17 ultimately depend from claim 2. Thus, for the reasons stated heretofore regarding the claim rejection under 35 USC § 102(b), independent claim 1 and dependant claims 3-17 patentably distinguish over Casanova.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date: September 20, 2004

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